Wisconsin Entomological Society Newsletter

Volume 26, Number 2 **June 1999**

A Quote For Our Times—from Henry David Thoreau:

"The catechism says that the chief end of man is to glorify God and enjoy him forever, which of course, is applicable mainly to God as seen in his works. Yet the only account of its beautiful insects—butterflies, etc.—which God has made and set before us which the State ever thinks of spending any money on is the account of those which are injurious to vegetation! This is the way we glorify God and enjoy him forever. Come out here and behold a thousand painted butterflies and other beautiful insects which people the air; then go to the libraries and see what kind of prayer and glorification of God is there recorded. Massachusetts has published her report on "*Insects Injurious to Vegetation,*" and our neighbor, the "*Noxious Insects of New York.*" We have attended to the evil and said nothing about the good. This is looking a gift horse in the mouth with a vengeance. Children are attracted by the beauty of butterflies, but their parents and legislators deem it an idle pursuit. The parents remind me of the devil, but the children, of God. Though God may have pronounced his work good, we ask, *'Is it not poisonous?'*"

Henry David Thoreau
Essayist & Poet
(1817-1862)

Summer Insect Field Trips Offered by The Nature Conservancy and the Madison Audubon Society

These are educational, not collecting, expeditions

The Nature Conservancy and the Madison Audubon Society:

DRAGONFLIES OF THE ST. CROIX RIVERWAY

Sat., May 29, 1:00 P.M.–4:00 P.M.
Burnett County

This trip will showcase the beauty, biology and behavior of some of Wisconsin's 111 species of dragonflies. These "macro-insects" are more abundant in the northern portions of our state. The unpolluted water of the St. Croix River is especially hospitable to a number of rare and beautiful river dragonflies—such as the St. Croix Snaketail, a new North American species discovered by our trip leader, or the Skillet Clubtail with the largest club of any North American species, or the diminutive Pygmy Snaketail. Dragonfly expert, Bill Smith, Zoologist with the Bureau of Endangered Resources, will discuss the biology and natural history of the fascinating, high-speed world of dragonflies. We will observe the beauty and behavior of these amazing aerialists.

Wear long sleeves, long pants and a hat to protect against the sun. Be prepared to wade in shallow water, if you choose. Take along waterproof footwear in case we encounter wet conditions. Bring binoculars if you have them. (The closer they can focus, the better.)

Meet at the Marshland Visitor Center. Directions: From the intersection of State Highways 53 and 70 in Spooner (Washburn Co.) take 70 to the west through Siren and Grantsburg (Burnett Co.) From Grantsburg continue west on 70 for about five miles, crossing the St. Croix River into Minnesota. The Marshland Visitor Center is about ¼ mile past the bridge across the St. Croix. Call Bill Smith at (608) 266-0924 (work) only if you have a question about the trip.

Madison Audubon Society:

DRAGONFLIES & BUTTERFLIES OF CHEROKEE MARSH

Sun. June 27, 10:00 A.M.–Noon
Madison (Dane County)

This two-hour walk will focus on those big and beautiful "macro-insects": butterflies and dragonflies. Together they total about 263 species in Wisconsin. We will observe their beauty and learn about the identification, behavior and lifestyle of the various species we encounter. Observe with eye or binoculars (bring binoculars if you have them, the closer they can focus the better). Leaders will be macro-insect enthusiasts, Dave Fallow, Karl Legler and Dave Westover.

Please see **FIELD TRIPS**, *Page 5*

The Wisconsin Entomological Society Newsletter is published three times a year, at irregular intervals. It is provided to encourage and facilitate the exchange of information by the membership, and to keep the members informed of the activities of the organization. Members are strongly encouraged to contribute items for inclusion in the newsletter. Please send all news items, notes, new or interesting insect records, season summaries, and research requests to the editor:

Janice Stiefel, W6311 Mullet Lane, Plymouth, WI 53073. e-mail: jstiefel@excel.net

NOTE: Please report any address changes to Les Ferge, 7119 Hubbard Ave., Middleton, WI 53562. e-mail: ferge@chorus.net

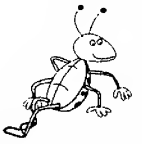
From: Babette Kis
Milwaukee, WI

During an Aug. 1997 night survey of orb spiders, local Boy Scouts counted 42 mosquitoes on the web of one Black and Yellow Argiope. A total of 72 webs were surveyed on the three-acre Racine County Wisconsin prairie remnant. (This scout group has helped Babette do her "*spider surveys*" for over ten years.)

Although missing two front left legs and one front right leg, a Cross Spider (*Araneus diadematus*) was able to catch ½" long flies, smaller flies and ½" long beetles during the day. The spider caught ½" to ¾" long moths at night. Mosquitoes were also seen on the web, but were not wrapped. Observations were made from July 19 through Aug.. 16, 1997 on a S. E. Wisconsin prairie remnant.

In late July 1996, a male flower spider on a Purple Coneflower, was observed with the following: 3 Asparagus Beetles, a Red and Green Leafhopper, another leafhopper (green, species unknown) and a ¼" black beetle (species unknown). Observations were made in Babette's Milwaukee backyard. ❦

BUG BYTES



Backyard and field observations, plus information of interest

From: Pat Seawell
San Antonio, TX

My "*beyond bizarre*" story of the season involves a Black Swallowtail (obviously a male) who was patrolling my yard, with the sole objective of chasing all the other butterflies away. Suddenly, flushed with success, he attempted to chase a female Black-Chinned Hummingbird away! Not once, but twice! (The first time she just held her ground and glared at him. The second time she held her ground and gave him a piece of her mind! "*...and don't even think about dive-bombing me again!*") I'm sure there's a moral in this tale somewhere. ❦

New Butterfly Guide

Butterflies through Binoculars —The East, by Jeffrey Glassberg, has just been published (cost: $18.95). It has a very extensive collection of photo plates of butterflies in nature. The treatment of skippers is excellent. It has range maps and graphic flight periods. The best guide currently available. Glassberg is president of the North American Butterfly Assoc. and recommends using binoculars rather than a net for the general enjoyment of butterflies. A list of ultra-close-focusing binoculars is available from WES member, Karl Legler, 429 Franklin St., Sauk City, WI 53583. An informative binocular catalog is available from Eagle Optics (608) 836-6568. ❦

Please send any observations for the next ***BUG BYTES*** column to Janice Stiefel, W6311 Mullet lane, Plymouth, WI 53073 or e-mail: jstiefel@excel.net

1999 Natural History Workshops to be conducted at the UWM Field Station

The University of Wisconsin-Milwaukee Field Station conducts a series of Natural History Workshops. These workshops offer an opportunity to study focused topics at college-level instruction under the guidance of noted authorities. Most workshops present two full days of instruction. Housing and meals are available at the Station. Enrollment is limited to 20; the atmosphere is informal and instruction is individualized. Workshops may be taken for undergrad or graduate college credit by enrolling in UWM, Topics in Field Biology. Fees vary. Please contact the Station for more details and a registration form. The 1999 Workshop Schedule includes the following courses:

1. **SEDGES:**
   Identification & Ecology
   Instructor: Dr. Anton Reznicek
   June 11 & 12
2. **VEGETATION of WISCONSIN**
   Instructor: Dr. James Reinartz
   June 14–19
3. **LICHENS:**
   Identification & Ecology
   Instructor: Dr. Martyn Dibben
   June 25 & 26
4. **DRAGONFLIES:**
   Identification & Ecology
   Instructor: William A. Smith
   July 9 & 10
5. **BEETLES:**
   Identification & Ecology
   Instructor: Dr. Dan Young
   August 6 & 7
6. **MUSHROOMS & OTHER FLESHY FUNGI:**
   Identification & Ecology
   Instructor: Dr. Alan Parker
   September 11 & 12
7. **BIRD BANDING:**
   Trapping Methods & Bird Examination Techniques
   Instructor: Vicki Piaskowski
   September 18

University of Wisconsin-Milwaukee
Field Station
3095 Blue Goose Rd.
Saukville, WI 53080

Contact person: Jim Reinartz
e-mail: jimr@uwm.edu
Phone: (414) 675-6844
Fax: (414) 675-033

The Moth That Didn't Stay For Dinner

by Babette Kis

On a muggy July evening in 1996, I left my family and air-conditioned home and drove to a southeastern Wisconsin prairie remnant to observe the nocturnal interactions of moths and spiders. Armed with headlamp (with which to observe nightly goings on) and sketchbook (in which to record nightly goings on), I left the car. Swarms of mosquitoes greeted me, buzzing in my ears and feasting on my arms and face. A prudent person (or my children) might have told me I should have brought insect repellent. But I couldn't do that. Insect repellent drives off, not only mosquitoes, but some species of night-flying moths I had come to observe.

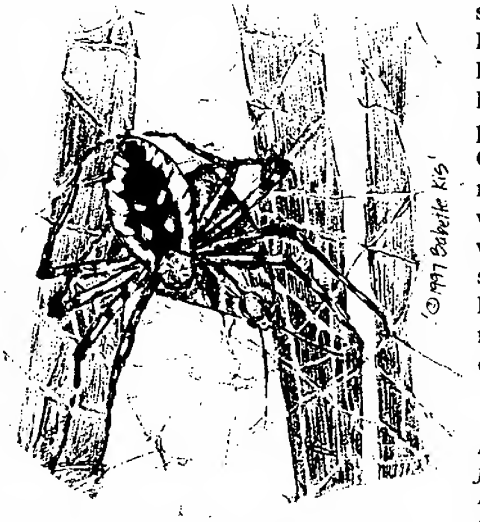
The Prairie Blazing-Stars were in full bloom on that summer night. On one patch of a dozen lavender stalks, I counted between 30 and 40 tan, inch-long moths with "scratch art" markings. Nearby, Black and Yellow Argiopes (*Argiope aurantia*) and Banded Argiopes (*Argiope trifasciata*) had connected their webs to Blazing-Stars, Asters and Rattlesnake Masters. Ten yards away, adjacent to a cornfield, Cross Spiders (*Araneus diadematus*) waited on webs they had woven among the tall grasses.

For the first quarter of an hour, moths came, nectared and left the flowers, deftly avoiding the orb weavers' webs. Then, illuminated by the beam from my headlamp, one of the "scratch art" dart moths flew into a Cross Spider's web. Its feet tangled, the moth struggled to free itself. Within a second, the Cross Spider was there, wrapping and biting its prey. Within a minute, the moth was neatly trussed and immobile. Minutes later, another one of these moths, landing abdomen-side first on the web of a Black and Yellow Argiope, was similarly captured.

At almost eleven o'clock, another moth of this species headed straight for the web of another Cross Spider. However, before it hit, this moth appeared to anticipate the web, and, instead of landing feet first, it somersaulted and landed backside on the sticky strands. It did not struggled to free itself but held perfectly still, feet out, as if it were frozen. In a flash, the spider was there, walking around the moth. The moth remained perfectly still. After a few seconds, the spider climbed back to its waiting area. As soon as the spider stopped moving, the moth gave a twist, freed itself from the web and flew off. In the light of my headlamp, a sparkling layer of scales glistened.

A year later, in Aug. 1997, a repeat performance was given by this same species of moth. This time the web belonged to a Black and Yellow Argiope. Just like the moth of the previous year, this moth did a neat back flip onto the web, so the top of its wings stuck to the sticky strands. This moth also held its feet out and stayed perfectly still. The spider went over to the moth but, apparently sensing no vibration, retreated to its waiting area. The moth escaped by twisting, leaving some of its scales on the web.

Orb weavers catch their prey by sensing web vibrations their struggling prey makes. But the two "scratch art" dart moths that landed on their backs remained perfectly still; they gave off no vibrations. Hence, they were apparently no more interesting to the spiders than were the plumed Indian Hemp seeds that had been blown onto many of the webs. These moths were able to escape, not only because they give off no vibrations, but because the excess or abundant scales on the backs of their wings made it possible for them to pull away from the webs. Only the moths of this species, that apparently sensed a web before they hit, and did a back flip, used this escape technique.



Black and Yellow Argiope catches an unidentified moth species.
Artwork: Babette Kis

Master's Dart nectaring on Prairie Blazing-Star
Artwork: Babette Kis

In August of 1996, I brought a specimen of this moth to Susan Borkin of the Milwaukee Public Museum. She identified it as a Master's Dart (*Feltia herilis*). I had previously thought it was a Dingy Cutworm Moth. Did whomever named the moth know of the clever way it escaped from an orb weaver's web? Or is this name merely serendipitous? Either way, Master's Dart is an appropriate name for this master of escape—the moth that didn't stay for dinner.

Babette is a wife and mother of three, full-time project architect at the City of Milwaukee, part-time naturalist, writer, artist, and former science teacher. On muggy summer evenings, she frequently deserts her husband and children to observe nightlife on prairie remnants.

MULTICOLORED ASIAN LADY BEETLE

by Phil Pellitteri

Every fall from mid to late October numerous reports of large numbers of lady beetles on and in homes and other buildings have been seen in the Midwest. The species is the Multicolored Asian Lady Beetle (*Harmonia axyridis*). Usually we would not be concerned because lady beetles are beneficial insects that eat aphids and other insect pests. But this species can be a nuisance when they gather in very large numbers around windows and doors or move inside. Fortunately, they are harmless. [Note: I do receive reports that they can bite. They do not break the skin, but if they find soft skin they can pinch.]

This ladybird beetle (sometimes know as the Halloween Lady Beetle) has only been recorded in numbers in Wisconsin, Iowa, and Minnesota since 1994. This is an introduced species from eastern Asia or Japan. It is not known exactly how it became established in the United States. There have been numerous attempts from 1916 until 1985 to establish this species as a biological control agent for pecan aphids. This beetle is an important predator of scale and aphid pests on trees in Asia. The first specimens recovered in the U.S. were collected in Louisiana during 1988. Since then, the beetle has increased its distribution to include all of the Great Lakes and all east coast states.

These oval, convex, ⅓" beetles are pale orange in color with 19 black spots on the wing covers. The 19 spots are arranged as a row of five spots just behind the pronotum, followed by two rows of six spots, and a forth row of two spots. There is a white and black shaped "W" behind the head in most specimens. A fraction of these beetles are either without these spots or may only have traces of 4 to 6 spots on the wing covers. In Asia, this beetle occurs in at least 100 different color forms including black forms with two orange spots which has also been collected in Wisconsin.

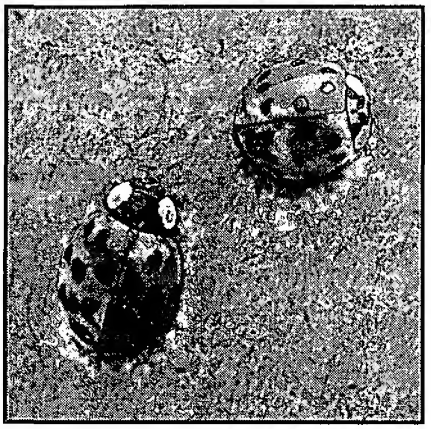
Multicolored Asian Lady Beetles cluster on homes in search of overwintering sites. They usually select the sunny west or southwest side of buildings. It is believed they use a chemical called a pheromone to attract each other. After the beetles settle down on the sides of buildings, many leave on their own by nightfall. It is likely these beetles move to leaf litter, underneath boards, logs, or other protected areas in search of overwintering sites after the first frost. Some beetles do overwinter under siding or in attics and can be active on sunny days in winter. All surviving beetles will move outdoors in the spring.

As usual, prevention is the key to keeping this ladybird beetle from getting into homes. Make certain that cracks along windows and doors are weatherstripped. Ventilation openings in attics should be screened or sealed, as appropriate. Remove beetles from inside the home with a vacuum, broom or collect by hand and deposit them outdoors. Lady beetles defend themselves by bleeding from their joints. If handled too roughly they can stain carpets, walls or curtains.

One of the best ways to limit unwanted intrusions by insect pests is to deny them entry—a procedure known as pest-proofing. Many pests seek refuge in homes and other buildings in response to changes in weather...such as extended periods of rain or drought, or the onset of cooler temperatures in autumn. Taking steps to block their entry before they end up inside can greatly reduce the chances of future sightings. Equipment and materials mentioned can be purchased at most home improvement or hardware stores.

Proofing Details:

1. Install door sweeps or thresholds at the base of all exterior entry doors. While lying on the floor, check for light filtering under doors. Gaps of 1/16" or less will permit entry of insects and spiders. Apply caulk (see #3) along bottom outside edge and sides of door thresholds to exclude ants and other small insects. Gaps under sliding glass doors can be sealed by lining the bottom track with ½" to ¾" weatherstripping.



Multicolored Asian Lady Beetles
Photo: Janice Stiefel

2. Seal utility openings where pipes and wires enter the foundation and siding, e.g., around outdoor faucets, receptacles, gas meters, clothes dryer vents, and telephone/cable TV wires. These are common entry points for such pests as rodents, ants, spiders and yellow jackets. Holes can be plugged with caulk, cement, urethane expandable foam, steel wool, copper mesh (Stuffit®) or other suitable sealant.

3. Caulk cracks around windows, doors, fascia boards, etc. Use a good quality silicone or acrylic latex caulk. Although somewhat less flexible than pure silicone, latex-type caulks clean up easily with water and are paintable. Caulks that dry clear are often easier to use than pigmented caulks since they don't show mistakes.

4. Repair gaps and tears in window and door screens. Doing so will help reduce entry of flies, gnats, mosquitoes and midges during summer, and cluster flies, lady beetles, and other overwintering pests in early fall.

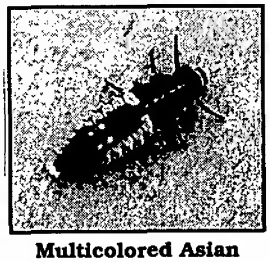
Phil Pellitteri, District Outreach Specialist
College of Agricultural & Life Sciences
Dept. of Entomology, UW-Madison, WI

Lady Beetles... "In Love"

by Janice Stiefel

Thousands of Asian Lady Beetles spent their winter in our building project in Door County. They were everywhere—on the windows, the ceiling, and walls. After dark they would collect around our lamp in the living room, diving into our hair and on the pages we were reading. In other words, they were a nuisance and, if touched, they exuded an unpleasant smell.

Since we have an atrium attached to our house and we finally got it screened from the rest of the living quarters, I decided to escort all aimlessly wandering lady beetles into that room to dine on the aphids which had appeared on some of the plants. A week later I noticed that the lady beetles were very happy and content...they were mating! At one time, I saw at least ten pairs hooked together. Two week later I noticed some weird black and orange beetle-like insects (approximately ¼" to ⅜" long) on the plants. I thought, *"Oh great, now where did these guys come from?"* Automatically I assumed that they were not a benefit to my plants and considered destroying them. Then the light bulb went on in my head. *"Could these creatures be the larvae of the lady beetles?"* No one ever talks about the larvae when referring to lady beetles, so I thought they started out as teensy-weensy lady beetles. After consulting my beetle field guides and finding nothing, I finally looked in the little *Golden Guide to INSECTS*. It was there I found the larvae. The markings were different, because they were describing different species of lady beetles, but the shape and description fit what I had on my plants in the atrium. In that book it says *"The larvae feed on aphids and pass through four growth stages. When mature, they pupate in the remains of the last larval skin."* Another interesting fact found in this book—we have some 350 species in this country and the name, ladybug or ladybird, can be traced back to the Middle Ages, when these beetles were dedicated to the Virgin.



Multicolored Asian Lady Beetle Larva
Photo: Janice Stiefel

To continue...I placed one larva in a jar with a few leaves of Stinging Nettle, along with the aphids which were sucking the plant's juices. The larva dined on the aphids and eventually made a strange-looking pupa which resembled a cross between the lady beetle and the larva. When I discovered what the pupa looked like, then I detected them hanging on the wood of our atrium walkway, on plant leaves, even on the walls. Prior to that time, I would have never noticed them.

It's amazing how long it takes to discern the activities of nature that are taking place right under our nose. I'm also astonished as to how quick we are to destroy an insect (myself included) when we do not know its identity. Automatically it's taken for granted that the insect is harmful. What I learned about the lady beetle has been an eye-opener. In the future, I will not consider destroying any insect unless I know what it is and its potential for harm or benefit. I shudder to think of how many of these valuable insects have been exterminated; probably with the same potentially harmful concoctions that they, themselves, could have replaced.

Wisconsin Entomological Society
Dues for 1999

Individual Membership	$5/00/yr.
Family Membership	$10.00/yr.
Sustaining Membership	$15.00/yr.
Patron Membership	$25.00/yr.

Please make checks payable to *Wisconsin Entomological Society* and send to Tom Rocheleau, *Wisconsin Entomological Society*, 3100 Buena Vista St. Madison, WI 53704

FIELD TRIPS, *from Page 1*

Dress for protection from the heat and sun. A hat is recommended. Directions: On the north side of Madison, take Northport Dr. (Hwy. 113), then turn north on Sherman Ave. If you have any questions about the trip, please call Karl Legler at (608) 643-4926.

Madison Audubon Society:
1999 "FOURTH OF JULY" MADISON BUTTERFLY COUNT
Sat., July 3, 9:00 A.M.–Noon
Madison (Dane County)

This will be the 9th annual Madison count. On last year's Madison census, 13 counters in two groups counted 524 butterflies for a record 46 species. Out of 53 counts in Wisconsin and five surrounding states, Madison had the highest number of species!

The leader will provide identification expertise. If you can identify butterflies, or can help spot butterflies, or just want to see and learn about butterflies, join us on this count. Get close and observe with eye or close-focusing binoculars. Dress for protection from the heat and sun; a hat is recommended. Bring a lunch, as the trip will last until noon. (But anyone who wants to continue counting in the afternoon can do so.) The North American Butterfly Assoc. requires a $2.50 fee from each count participant to cover administrative and publishing costs. Meet at the parking lot for Greene Prairie in the UW Arboretum in Madison at 9:00 A.M. There is no "rain date." We will count until noon. Directions: From the south Beltline Highway heading west, take the Seminole Highway exit and turn left (south) on Seminole Highway, crossing the Beltline, to the small arboretum parking lot. Meet here. (Or from the south Beltline Highway heading east, take the exit for Todd Dr. Then backtrack west on Todd Dr. until you reach the parking lot at the intersection with Seminole Highway.) If you have any questions about the Madison Butterfly Count, please call the count compiler, Karl Legler (608) 643-4926 (Sauk City).

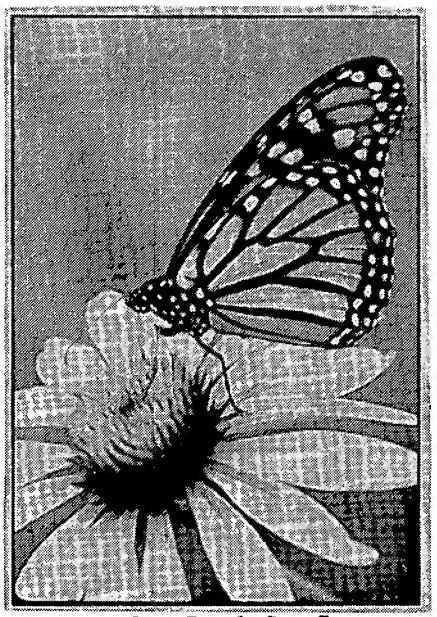
Please see **FIELD TRIPS**, Page 6

A Butterfly For Daddy

by Janice Stiefel

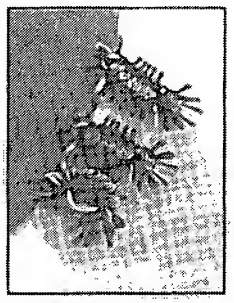
Etched in my memory —like it happened yesterday— the summers of my childhood were spent exploring and traipsing through acres of prairie habitat which surrounded my family's home in Skokie, Illinois. Those were the days when this portion of that Chicago suburb was an abandoned truck farm, where asparagus had been grown. Due to lack of use, the land reverted to above-my-head tall grasses and thousands of Common Milkweeds (*Asclepias syriaca*). I remember playing with the Monarch caterpillars which were found in great abundance on these plants. I let them crawl on my arms, stroking and adoring them with a passion. I also recall many Red Milkweed Beetles (*Tetraopes tetraophthalmus*) that my brother and I would stuff into a hollow rubber ball which had a small hole in it. We'd listen to the buzzing of the numerous beetles we had captured and caged in that deplorable environment. Guilt still haunts me over this childhood escapade. Another caterpillar which was plentiful toward the end of August was the larva of the Milkweed Tussock Moth (*Euchaetes egle*) which also dined on Milkweed plants. The caterpillar was densely covered with tufts and pencils. It had many black and white hairs of different lengths on its body. The tufts were along the front, rear and sides. Six pairs of short, thick, yellow/orange and black tufts were on the middle segments of the body. Unlike the Monarch caterpillars who ate alone and did not like sharing their space with each other, the Milkweed Tussocks lived in a commune-type environment. When disturbed they would all roll into a ball and fall to the ground.

Red Milkweed Beetle
Photo: Janice Stiefel



Monarch on Purple Coneflower
Photo: Janice Stiefel

Many hours were spent in pursuit of understanding "caterpillars." In those days field guides, or even libraries, were not available to a kid like me. Names of individual caterpillar species were never mentioned— they were just called, "*caterpillars*." Even as a first grader, I knew they had to have separate names because they were so different—one was relatively smooth and the other was hairy (almost like the hairs on my pet Guinea Pig). To most people, including my parents, caterpillars were meant to be destroyed. Daddy could not understand my obsession with them. [Today, I understand his lack of interest because there was a war going on, he was struggling to keep food on the table, clothes on our back and a roof over our heads.]



Milkweed Tussock Moth larvae
Photo: Janice Stiefel

One day, my curiosity got the best of me. I carefully placed, what I now know was the Milkweed Tussock caterpillar, in the purse-like section of my school bag. I was going to take it to my first grade teacher; she would surely know what its real name was. Waiting until recess, when I knew I could have a private moment with her, I gently lifted my precious treasure from the purse in my school bag, placed it on my arm and asked: "*Miss..., do you know what this caterpillar is called besides— caterpillar?*" She startled me when

Please see **BUTTERFLY**, *Page 8*

FIELD TRIPS, *from Page 5*

Madison Audubon Society
BUTTERFLIES OF ROCKY RUN—WEST
Sun., July 11, 10:00 A.M.–Noon
Columbia County

Ann Swengel will lead this two-hour hike in the west section of Rocky Run Creek in Columbia County. We will walk along wetland, old field and woodland edges; observing and learning about a variety of butterflies (swallowtails, sulphurs, hairstreaks, skippers, etc.) as they take nectar from Rocky Run's many wildflowers. Ann is a widely-known butterfly researcher, photographer and author of numerous articles on butterflies. She is naturalist at Mirror Lake State Park and a vice president of the North American Butterfly Association.

Bring binoculars, if you have them (close-focusing ones work best) or just get close! It's best to wear long pants and a hat for protection from the sun. Directions: We will carpool and leave at 9:00 A.M. from the middle of the parking lot of Cub Foods on the east side of Madison. From the intersection of Highways 30 and 51 (Stoughton Rd.) go north on 51 and take the first right turn which leads to Nakoosa Trail and Cub Foods. (Or meet at 10:00 A.M. at the west side of Rocky Run Creek parking lot. From Madison go north on Highway 51. Nearly 4 miles north of Poynette, turn right onto Morse Rd. and go east for about ¾ mile. There is a small parking lot on the north side of the road.) If you have any questions about this trip, please call Karl Legler at (608) 643-4926.

Bright Eyes

by Carroll Rudy

Last summer when the sun burned hot and bright on the side of the house, a fuzzy little Jumping Spider used to prowl about on the woodwork by the back door searching for flies. She became a familiar part of the back door environment as flies, lurking on the screen door hoping to get inside, were easy pickings for a hungry spider. Friendly and fearless, this black furry spider would often

Harmless Jumping Spiders resembling tiny furry Tarantulas are common summer guests on the sunny sides of buildings.

hop about on the blue jeans of porch sitters and afternoon coffee drinkers. Her large, bright shiny eyes would follow our every movement, returning the gaze of a curious human.

Imagine my surprise when I found that she had decided to move inside with us when the cold icy winds of November drove the flies away, and made life inhospitable for spiders outside. Happily she hunted down the last of the autumn flies that had straggled indoors to hibernate. She settled down in a warm sunny south window among the houseplants and obviously intended to spend the winter there. Knowing that sooner or later she would get crushed by some careless human, I fixed her a winter retreat in a plastic critter cage.

Jumping Spiders are one of the most interesting and appealing of all spiders, and if any spiders can be considered cute and cuddly, it is they. They are chubby and fuzzy with large bright eyes and pretty colored markings on their bodies.

This particular spider is about a half inch long, and black as soot. It has three bright orange spots on top of its abdomen which lead some to mistake this species as a poisonous Black Widow, but they resemble each other no more than a black horse and a black cow resemble each other. Black Widows are shiny with slender legs and they spin webs in dark hiding places. Their red markings are on the underside rather than the top.

Jumping spiders do not spin webs. They are hunters who stalk their prey and pounce on it much like a cat. They love the sunlight and do their hunting on bright, hot summer days—often on the south side of a building. At night they retreat into a crevice where they spin a cocoon-like nest in which to sleep. As the name implies, they are good jumpers who can launch themselves several inches to catch an insect or escape an enemy. A strand of silk anchors them like a rock-climbing human's safety rope; so in case the spider falls, it can climb back up to its perch. The luckless insect caught by a Jumping Spider is bitten and paralyzed by the spider's venom. Then digestive juices are injected, the insect's insides liquify, and are sucked out with the fangs, leaving a perfect, undamaged, empty shell. Paralyzing the prey allows the spider to eat insects that are larger than itself without a struggle.

Stalking prey and leaping upon it like a miniature cougar require excellent eyesight. It is thought that Jumping Spiders have the best vision of any invertebrate animal. They do not have compound eyes as insect and other arthropods do. Instead there is an immovable lens (similar to our cornea) and a retina at the bottom of the barrel-shaped eye. The lens is immovable and instead the retina moves to focus the image. This makes the eyes appear to move and glitter. Like turrets on a tank, the four larger eyes on the front and four smaller ones on the sides point in several directions at once and each can focus individually.

They also have large fangs called chelicerae that catch, hold and eat the prey. Strangely enough they are usually a bright metallic color. My spider had shiny blue-green ones that seemed to glow from some directions and appear black from other angles. The effect was much like the security holograms on credit

Jumping Spiders may have the keenest eyesight of any invertebrate animal.

cards and other copy-protected products. Another shiny metallic spot appears on top of the spider when the sun shines on it.

Since a predator does not need bright metallic colors to catch food, they may seem at first to have no purpose, but Jumping Spiders need them for courtship displays that are elaborate and flashy. When a male spots a prospective mate, he begins to 'dance', swaying to and fro, signaling with large furry forelegs like semaphores, and flashing those shiny fangs. If the other spider is a female of his own species, who is interested in courtship, she signals back and they are a couple. Mistaken identity is impossible since each species of the 4,000 species of Jumping Spiders has a unique 'dance' all its own.

When winter comes and the insects die, cold-blooded Jumping Spiders must retreat to their cocoon-like nests to hibernate. Most probably die of cold or dehydration long before spring comes, and I have not been able to find out how long they can live. Most spiders, however, have short lives...surviving the winter in the egg or larval stage. Tropical Tarantulas are known to live for 25 years, but in our frigid domain, only the Wolf Spiders, those big hairy, fast-running, ground-hunting spiders, live for two or three years.

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BUTTERFLY, *from Page 6*

she screamed, "*Get that thing out of here. Get that thing out of here!*" She actually went crazy; for a moment I thought she was going to leap on her desk to get away from me. Crestfallen, I gently returned the caterpillar to the pouch in my school bag and quietly slipped away. I never told my parents about this, because they did not understand my attraction to these creatures.

Decades later, when my father was 90 years old, he stopped in for one of his frequent visits and noticed that I was cleaning Monarch caterpillar-rearing jars. They were munching away on Milkweed plants, oblivious to this gentleman who (at one time) felt that all caterpillars should be destroyed. At that moment, he probably still felt that way, because he said, "*What in the world, you're still horsing around with caterpillars? You were doing that when you were a kid.*" Agreeing with him, I said, "*Yes, Daddy, but now I have the books, knowledge and resources to understand and identify them.*" I went on to explained how the Monarch caterpillar hatches from a tiny egg on the underside of a Milkweed leaf, eats the Milkweed leaf or flower for 10 to 12 days, then attaches itself with a super glue to the Milkweed leaf or any surrounding vegetation, hangs there for 10 to 12 hours and then if you are lucky enough to be in its presence, BEFORE YOUR EYES, forms a beautiful jade-green chrysalis, dotted with gold. Approximately 10 to 12 days later the chrysalis turns transparent and the adult butterfly emerges.

Monarch Chrysalis

Daddy was actually interested for the first time in his life. He had never experienced the metamorphosis of a butterfly. To my great astonishment, he said, "*You know the butterfly is a symbol of the resurrection* (long pause); *do you think I could raise one in my apartment?*" Of course, my answer was, "YES!" In the weeks ahead, he did just that. With his own eyes he saw the caterpillar form a chrysalis and the emergence of the adult 12 days later. When the adult butterfly emerged, he immediately bonded with it. Reluctantly, he released his "baby" into the sky and watched as a gentle breeze carried it away. Here he was, at age 90, and had never experienced this phenomenon of nature. He asked me to bring him another caterpillar to raise. I found one a week later and couldn't wait to deliver it to him. When I phoned him he did not answer. Shortly after that call, I was notified that daddy had died, unexpectedly, in his apartment.

Daddy's butterfly subtly conveyed the message I had been trying to communicate for decades and in the process gave him the hope of a glorious resurrection. ❦